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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,458	12/31/2003	Donald M. Grieco	I-2-0441.1US	2716
24374	7590	09/08/2004	EXAMINER	
VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			TRAN, THIEN D	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/749,458

Applicant(s)

GRIECO, DONALD M.

Examiner

Thien D Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-15 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (U.S Publication No. 2003/0185165 A1) in the view of Dalal (U.S Patent No. 6,633,554 B1).

Regarding claim 1, Ishii discloses a mobile wireless transmit/receive unit (WTRU) configured for wireless communication with a network system where the WTRU receives communication data that is selectively encoded and transmitted in predefined time frames, figure 3, comprising:

a multi-signals receiver (joint detector receiver) configured to receive and process multiple wireless signals in each of a series of time frames, each signal received within a common timeslot S having a unique mid-able codes (channel encoding) of the same communication data, paragraph 0059, including:

an estimator for plurality channel vectors in time slots (plurality of channel estimators), paragraph 0061, each configured to produce a channel estimate of a

respective received signal within a common timeslot based on the unique encoding of the received signal, paragraph 0067;

a JD calculator 8 (combiner), figure 12, configured to receive channel estimates from all of the channel estimators and combine the channel estimates for each data signal received in a common timeslot into a combined data signal, whereby the communication data common to the plurality of signals received in the common timeslot is then derived from the combined signal, paragraph 0107.

Ishi does not disclose the mobile wireless transmit/receive unit (WTRU) configured for wireless communication with a network system having a plurality of base stations. Dalal discloses a mobile unit 112 communicating in a network system having a plurality of base stations, figure 1. Therefore, it would have been obvious to one having ordinary skill in the art to have the feature of communication between the mobile wireless transmit/receive unit (WTRU) and the network system having a plurality of base stations so that the mobile wireless transmit/receive unit (WTRU) can freely move from region to region without an interruption of communication.

Regarding claim 4, Ishii discloses a wireless communication system comprising:  
a mobile wireless transmit/receive unit (WTRU) configured for wireless communication with a network system where the WTRU receives communication data that is selectively encoded and transmitted in predefined time frames, figure 3, comprising:

a multi-signals receiver (joint detector receiver) configured to receive and process multiple wireless signals in each of a series of time frames, each signal

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received within a common timeslot S having a unique midamble codes (channel encoding) of the same communication data, paragraph 0059, including:

an estimator for plurality channel vectors in time slots (plurality of channel estimators), paragraph 0061, each configured to produce a channel estimate of a respective received signal within a common timeslot based on the unique encoding of the received signal, paragraph 0067;

a JD calculator 8 (combiner), figure 12, configured to receive channel estimates from all of the channel estimators and combine the channel estimates for each data signal received in a common timeslot into a combined data signal, whereby the communication data common to the plurality of signals received in the common timeslot is then derived from the combined signal, paragraph 0107.

Ishii does not disclose a plurality of base stations interconnected with the network unit, each base station having a geographic area of service, wherein the network unit configured to assign selected base stations to transmit communication data to the WTRU based on the WTRU being disposed in the geographic range of service of the selected base stations. Dalal discloses a plurality of base stations interconnected with the MSC (network unit), each base station having a geographic area of service, figure 1, wherein the MSC configured to assign selected base station to transmit communication data to a mobile unit 112 (WTRU) based on the mobile unit 112 being disposed in the geographic range of service of the selected base stations, col.10 lines 1-27. Therefore, it would have been obvious to one having ordinary skill in the art to have the feature of the plurality of base stations interconnected with the network unit, each base station

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having a geographic area of service, wherein the network unit configured to assign selected base stations to transmit communication data to the WTRU based on the WTRU being disposed in the geographic range of service of the selected base station to transmit data to the WTRU so that the soft handoff can be performed properly.

Regarding claim 9, Ishii discloses a method of a mobile wireless transmit/receive unit (WTRU) configured for wireless communication with a network system where the WTRU receives communication data that is selectively encoded and transmitted in predefined time frames, figure 3, comprising:

receiving wireless signals from each of a plurality of multi-user signals in each of a series of timeframes where each signal received within a common time slot has a unique channel encoding of the same communication data, paragraph 0059;

producing a channel estimate of each respective signal received within a common timeframe based on the unique encoding of the received signal, paragraph 0061;

combining the channel estimates for each data signal received in a common time slot to produce a combined data signal for each respective timeframe, paragraph 0067 ;  
and

deriving the communication data common to the plurality of signals received in each common timeslot from the combined signal for each respective timeframe, paragraph 0107.

Ishii does not disclose a plurality of base stations interconnected with the network unit, each base station having a geographic area of service, wherein the network unit

configured to assign selected base stations to transmit communication data to the WTRU based on the WTRU being disposed in the geographic range of service of the selected base stations. Dalal discloses a plurality of base stations interconnected with the MSC (network unit), each base station having a geographic area of service, figure 1, wherein the MSC configured to assign selected base station to transmit communication data to a mobile unit 112 (WTRU) based on the mobile unit 112 being disposed in the geographic range of service of the selected base stations, col.10 lines 1-27. Therefore, it would have been obvious to one having ordinary skill in the art to have the feature of the plurality of base stations interconnected with the network unit, each base station having a geographic area of service, wherein the network unit configured to assign selected base stations to transmit communication data to the WTRU based on the WTRU being disposed in the geographic range of service of the selected base station to transmit data to the WTRU so that the soft handoff can be performed properly.

Regarding claim 2, Ishii discloses an estimator (blind code detection unit) for calculating only the known signal of its receiver that not exceeding the calculated threshold (limiting the spreading codes for neighboring WTRUS to only those comparable to or stronger than the WTRU'S own codes), paragraph 0045 and 0052.

Regarding claims 3, 5 Ishii discloses that the communication signals are of a time-division duplex-code division multiple access (TDD-CDMA) type, paragraph 0004.

3. Claim 10-15 are rejected under 35 U.S.C. 102(a) as being anticipated by Dalal (U.S Patent No. 6,633,554 B1) in the view of Oh et al (U.S Publication No. 2004/016684 A1).

Regarding claims 10, 13, Dalal discloses a wireless communication network comprising a mobile station (WTRU) performing data communication with a first base station and within communication range of a second through Nth base station, a method for soft handover, col.5 lines 35-45, comprising the steps:

the mobile station measuring received signal strength of a pilot signal(signal code power measurements) from each base station, col.7 lines 8-37;

the network assigning the WTRU to a new base station responsive to received measurements from the WTRU, col.10 lines 8-17;

the new base station and the first base station simultaneously transmitting the same network data in a common timeslot to the WTRU, col.10 lines 1-35;

the new base station and the first base station simultaneously receiving and demodulating data from the WTRU for processing by the network, col.10 lines 1-35; and

Dala does not disclose the WTRU jointly detecting the communications from the first base station and the new base station using separate channel estimate means based on the known scrambling and spreading codes for each base station, until soft handover to the new base station is complete. Oh discloses a handoff region where a mobile phone 120 simultaneously communicates with three base stations, figure 1, and that the mobile station demodulating (dispreading and descrambling) and estimating data symbol, paragraphs 0041 and 0042, 0055 to obtain TPC values of each base station for making a soft handoff decision, paragraph 0081. Therefore, it would have been obvious to one having ordinary skill in the art to have the WTRU jointly detecting the communications from the first base station and the new base station using separate



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channel estimate means based on the known scrambling and spreading codes for each base station, until soft handover to the new base station is complete so that the data can demodulated during the period of handoff.

Regarding claims 11, 14, Oh discloses that the base station broadcasts on a beacon channel and transmits data on a dedicated channel, further comprising the steps:

the WTRU sending an uplink transmit power control (TPC) command signal to both the first base station and the new base station, paragraph 0058;

the network adjusting target SIR signals for the first base station and the new base station for ensuring that at least one base station will receive an error-free message, paragraph 0058; and

the WTRU receiving a first target SIR for the first base station and a second target SIR for the new base station, paragraph 0059. Therefore, it would have been obvious to one having ordinary skill in the art to have the feature of controlling the power of transmission from uplink and downlink in cdma system so that to minimize the error rate of data due to the interference of multiple signals from users.

Regarding claims 12, 15 Oh discloses the steps:

the pilot signal (beacon signal) cycling through each base station, periodically measuring beacon channel power and reading data in 10 ms frame period, paragraphs 0035 and 0048;

the network arranging all broadcast time slots to be coincident for ensuring

that there is no conflict between receiving broadcast signals of the beacon channel and data of the dedicated channel from each base station, figures 2. Therefore, it would have been obvious to one having ordinary skill in the art of arranging beacon and data signals in periodically not conflicting each other to avoid the loss of communication.

***Allowable Subject Matter***

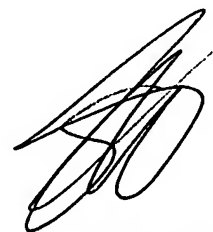
4. Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

Thien Tran



**STEVEN NGUYEN  
PRIMARY EXAMINER**